

**Cooney Dam Outlet Canal: Weir Replacement and Automated Instrumentation Project (RRGL Rank 38<sup>th</sup>--Carbon County)**

**Cooney Dam and Reservoir:**

- State-owned water storage project managed by the DNRC State Water Projects Bureau;
- All day-to-day operations and maintenance costs are the responsibility of the Rock Creek Water Users Association;
- Built in 1937, the high-hazard, earth fill dam impounds 28,140 acre-ft of water;
- Fish, Wildlife & Parks leases part of Cooney State Park's land from DNRC;
- Contracts for 21,770 acre feet of water deliveries supplies approximately 20,000 acres of cropland with irrigation water;
- Provides an environment for multiple aquatic species;
- Allows for continuous downstream flow all year to enhance downstream fisheries.
- The SWPB is required by law to maintain measuring devices on water appropriation facilities (MCA 85-2-113) and to perform necessary repairs (MCA 85-2-112) on State owned dams.

**The existing measuring weir immediately downstream of the dam's outlet is:**

- 75 years old, needs replacement as it is severely dilapidated, state of eminent failure.
- A measuring weir is essential for operating the dam safely and efficiently.
- Releases must be measured to safely manage the reservoir and to accurately deliver stored irrigation water.
- Weir replacement enhances dam safety.
- Non-action could result in weir failure with subsequent damage to the dam.
- Dam failure potentially results in downstream loss of life & property.

**This project replaces the failed weir with a new measuring structure and installs automated instrumentation to measure and record weir flows and reservoir elevation, making dam operation safer and more efficient.** It enhances Montana's renewable resources by providing the means to manage tributary storage; conserves water; preserves cropland, natural resource-based recreation, and fish and aquatic habitat; and improves water use efficiency by replacing a failing water measuring device. The project will allow Water Commissioners to accurately allocate water during water-short years.

<b>Proposed Project Budget</b>		
<b>Funding Source (grant/loan or cash reserves)</b>	<b>Amount</b>	<b>Fund Status</b>
RRGL Grant	\$100,000.00	Uncommitted
Water Users In-Kind	\$140,000.00	Committed
DNRC In-Kind Services	\$ 20,000.00	Committed
<b>Estimated Total Project Cost</b>	<b>\$260,000.00</b>	

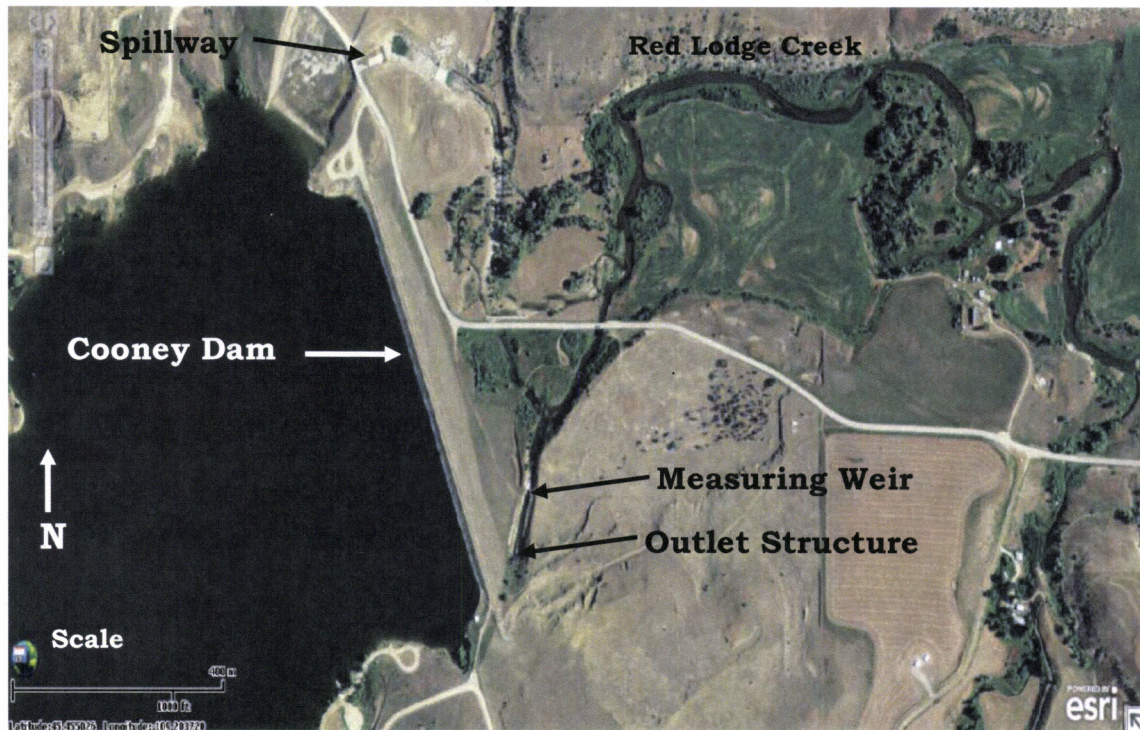
This project provides multiple benefits (conserve, manage, and preserve) to multiple renewable resources (water, soil, tributary storage, cropland, wildlife habitat, and fish and aquatic habitat) in Montana by:

- Conserving water and soil; (The project conserves an estimated 7,000 acre-feet of water annually through better management, which is ~25% of reservoir capacity. An estimated 5,000 tons of soil would wash into Red Lodge Creek if the weir was to fail during use.)
- Managing and preserving tributary storage.

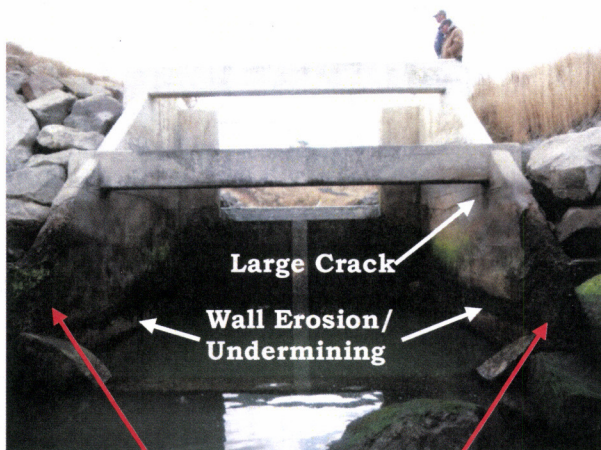


## COONEY DAM

← Pictures  
during 2011  
Floods →



To Billings, MT-40 miles NW; To Boyd, MT-7 miles E; To Red Lodge, MT-18 miles S



## EXISTING WEIR

← Downstream  
side of existing  
weir: undermined,  
cracking and  
crumbling

Upstream walls of  
existing weir:  
deteriorating,  
spalling and  
delaminating →

